

CLAIMS

1. A method for programming a memory cell, the memory cell comprising a well region in a semiconductor substrate, a first doped region and a second doped region formed in the well region, an oxide layer formed over a channel region in the well region between the first doped region and the second doped region, a doped polysilicon layer formed over the oxide layer, and a metal silicide layer formed over the doped polysilicon layer, the method comprising the step of heating the doped polysilicon layer to cause carrier activation and penetration of the dopant atoms from the doped polysilicon layer through the oxide layer into the channel region.

2. The method of Claim 1, wherein the step of heating the doped polysilicon layer comprises the step of applying a programming voltage across the metal silicide layer, the metal silicide layer being configured to agglomerate over the channel region when subjected to the programming voltage.